AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-9   [Cancelled]

10.   [Previously Amended]   The method as claimed in claim 26 wherein refusing the protection switch request comprises pending the request so that if the unprotected traffic being transported through the protection channel subsequently releases the protection channel, a network element (NE) that issued the priority switch request is notified.

11.   [Cancelled]

12.   [Cancelled]

13.   [Previously Amended]   The method as claimed in claim 27 further comprising performing switch operations to route the protected traffic from the working channel to the protection channel if the protection switch request is admitted.

14.   [Previously Amended]   The method as claimed in claim 13 wherein refusing the protection switch request further comprises:

forwarding a protection switch request pended message along the protection channel; and

if the occupied portion of the data transport capacity of the protection channel subsequently becomes unoccupied, forwarding a message along the protection channel indicating that the protection channel is idle.

15.   [Previously Amended] The method as claimed in claim 27 wherein admitting the protection switch request further comprises forwarding a pre-empted switch request message through the protection channel to request the unprotected traffic being transported through the protection channel to relinquish the data transport capacity of the protection channel.

16.   [Currently Amended] A protection switch processor of an optical network that supports protected traffic and extra traffic at predefined grades of service using pre-provisioned working and protection channels, the protection switch processor executing under control of software for applying a protection access policy for controlling access to each protection channel of the network, the software being stored on a computer-readable medium and comprising executable instruction code for:

determining a priority value associated with a protection switch request message for switching protected traffic from a working channel to its associated protection channel;

~~determining an occupancy of the protection channel;~~

determining an occupant priority value associated with the protection channel by determining a service priority value associated with unprotected traffic within ~~an occupant of~~ the protection channel ~~if the protection channel is occupied~~;

comparing the priority value associated with the protection switch request message to the occupant priority value; and

refusing the protection switch request ~~if~~ when a bandwidth of the working channel to be switched is greater than an unoccupied portion of the protection channel~~,~~ and the request priority value of the protection switch request is less than or equal to the occupant priority value of the protection channel.

17.   [Previously Amended] The protection switch processor as claimed in claim 16 wherein the software further comprises instruction code for:

admitting the protection switch request if the protection channel is idle, or the occupant priority value associated with the protection channel is lower than the priority value associated with the protection switch request message.

18.   [Currently Amended] The protection switch processor as claimed in claim 16 wherein the instruction code for admitting the protection switch request further comprises instruction code for:

sending a pre-empted switch request message to through the protection channel to direct unprotected traffic being transported through the protection channel to relinquish the data transport capacity of the protection channel.

19.   [Cancelled]

20.   [Cancelled]

21.   [Currently Amended] In an optical network including predetermined protection channels for transport of protected traffic during a failover, a method for controlling access to each protection channel, the method comprising:

assigning one of a predetermined set of at least two service priority values to each flow of unprotected traffic being transported through at least one protection path of the network, the unprotected traffic being transported through the network using at least one idle protection path;

assigning one of a predetermined set of request priority values to each protection switch request for switching protected traffic from a working channel to its associated protection channel; and

refusing a protection switch request if when a bandwidth of the working channel to be switched is greater than an unoccupied portion of the protection channel, and the request priority value of the protection switch request is less than or equal to the service priority value of unprotected traffic being transported through the protection channel.

22.   [Previously Presented]   The method as claimed in claim 21, wherein the predetermined set of at least two service priority values comprises a first service priority value corresponding to a preemptable class of service, and a second service priority value corresponding to a non-preemptable traffic class of service.

23.   [Previously Presented] The method as claimed in claim 21, wherein the first service priority value is higher than at least one of the predetermined set of request priority values.

24.   [Currently Amended] The method as claimed in claim 23, wherein the first service priority value is higher than request priority values associated with ~~any~~ either one ~~or more~~ of:

a degraded condition of the working channel; and

a test protection switch initiated by network management.

25.   [Previously Presented] The method as claimed in claim 21, wherein the second service priority value is higher than a request priority value associated with a signal fail condition of the working channel.

26.   [Currently Amended] In an optical network including predetermined protection channels for transport of protected traffic during a failover, a method for handling a protection switch request, the method comprising:

receiving the protection switch request for switching protected traffic from a working channel to its associated protection channel, the protection switch request including a request priority value;

determining a current occupancy of the protection channel, the occupancy being one of idle, occupied by unprotected traffic associated with one of a plurality of grades of service, and occupied by protected traffic switched from a working channel with a specific request priority; and

refusing the protection switch request ~~if~~ when a bandwidth of the working channel to be switched is greater than an unoccupied portion of the protection channel~~,~~ and the request priority value of the protection switch request is less than or equal to the service priority value of unprotected traffic being transported through the protection channel.

27. [Previously Presented] The method as claimed in claim 26 further comprising admitting the protection switch request if the priority value of the switch request is greater than the service priority value associated with the unprotected traffic being transported through the protection channel.